

NEW FRESH-WATER SHELLS FROM GUATEMALA.

By WILLIAM B. MARSHALL.

Assistant Curator, Division of Marine Invertebrates, United States National Museum.

The United States National Museum's rather extensive collection of the genus *Sphaeromelania* has recently been enriched by a fine series of specimens from Guatemala, collected and presented by Mr. Anson A. Hinkley, of Du Bois, Illinois. Among these is one lot of specimens which do not agree with any in the collection nor with any described species so far as I have been able to determine. Knowing that the species of *Sphaeromelania* are subject to great variation, as great, perhaps, as is to be found in the whole molluscan realm, I have been unusually cautious and have carefully considered all the evidence available before coming to the decision that these shells belong to a new species.

The new species of *Cochliopa* here described is very different from any previously known species. The shell of this species so intimately resembles *Valvata* that it would be placed in that genus were it not for the operculum.

SPHAEROMELANIA HINKLEYI, new species.

Plate 17, figs. 4-13.

Shell bulimiform, densely spirally striated, obsoletely malleated. Axial sculpture consisting of numerous fine growth lines, with an occasional rest period accentuated, especially on the body whorl just behind the aperture. Whorls (apical ones lost) apparently about seven, moderately rounded, rapidly enlarging, the body whorl forming about two-thirds of the shell. Suture well impressed. Color nearly uniform, dark chestnut. Aperture pyriform, columellar lip with a heavy deposit of callus, especially at its upper end, deeply sinuate near its lower end, its prevailing color dark purplish brown, pale on its inner edge. Interior of shell pale livid purplish with a vertical blackish stripe near the outer lip. Outer lip simple, margined with blackish.

The type (fig. 6), Cat. No. 336412, U.S.N.M., measures—length, 37.5 mm.; greater diameter, 21.5 mm.; lesser diameter, 19 mm. It and 15 other specimens were presented by Mr. Hinkley, who collected them in the Tsalbha River at Chama, Alta Vera Paz, Guatemala, in February, 1917.

All the specimens of *Sphaeromelania* figured on plate 17 are supposed to be mutations of this species. Figure 11 represents one extreme, in which the shell is larger, more slender, and of thinner texture, while figure 10 represents the other extreme, with short, stout chunky form. Several of the specimens have a faint, broad band of darker color encircling the middle portion of the whorls.

It is a pleasure to name this species in honor of Mr. Hinkley, whose explorations in Mexico and Central America have done much toward increasing our knowledge of the Molluscan fauna of those regions.

COCHLIOPA DULCENSIS, new species.

Plate 17, figs. 1-3.

Shell valvatiform, depressly, conically turritid. Whorls three and a half, excavately shouldered. Spirally ribbed with seven strong, nearly equal ribs. The first rib is at the shoulder, the third is at the periphery, the seventh marks the circumference of the umbilicus. Near the aperture the last whorl descends from the second to the third rib. Color, greenish horn; ribs reddish chestnut, showing as spiral bands within the aperture. Aperture entire, slightly oblique, subcircular, slightly narrowed at the upper part. Outer lip simple, minutely angled at each rib; columellar lip somewhat expanded and a little thickened within. Principal growth lines well marked on the shoulder, between the ribs and on the base, radiating, set at regular intervals and showing hints of chestnut coloring. Minor growth markings numerous, fine. Umbilicus wide, perspective, somewhat funnel-shaped, showing all the whorls, which appear to be loosely coiled. Operculum corneous, paucispiral, pale yellowish.

The type, Cat. No. 336413, U.S.N.M., measures—altitude, 1.3 mm.; greatest diameter, 3 mm.; least diameter, 2.3 mm. It and nine other specimens were presented by Mr. Anson A. Hinkley, who collected them in January, 1917, in the Dulce River, Guatemala.

The general aspect of this species resembles that of the well-known *Valvata tricarinata*. Viewed from above the two species are almost exact counterparts of each other so far as form and sculpture are concerned. In the living specimens the chestnut coloring of the spiral ribs does not show well against the dull background of the general surface, but in the dead shells the general color bleaches to a yellowish tinge and the dark coloring of the ribs becomes one of the most prominent features of the shell and throws the ribs into sharp relief. Within the aperture the chestnut banding is prominent in living shells, but hardly apparent in the dead specimens. The species is perhaps the most attractive of the *Cochliopas* thus far discovered in Central America. The spiral ribs are subject to some variation in number and strength.